

Animal Enhancement Activity – ANM15 -Forest Stand Improvement for Habitat and Soil Quality



A recent thinning creates downed wood and opens the stand which will increase forest understory growth and diversity. Two to 3 live trees per acre will be girdled to create snags based on community phase data in the Ecological Site Description. About 1 to 2 snags per acre are already present. Den/cavity trees have been retained throughout the thinned area.

Forest Stand Improvement - Habitat and Soil Quality

This enhancement consists of the creation of snags, den trees, and coarse woody debris on the forest floor to a level optimum for native wildlife usage and long-term forest soil health. It may be implemented during thinning or harvesting or it can be implemented separately.

Land Use Applicability

This enhancement is applicable on forestland.

Benefits

The natural abundance and distribution of snags, den trees (trees with cavities) and coarse forest floor wood have been altered by decades of land conversion, fire suppression, and timber and firewood harvest. Creating an optimum level of such materials provides nesting and hiding cover and substrate for bird, mammal, reptile, and amphibian species while also providing the insects and detritus on which they feed. Downed wood is a preferred growing medium for various species of bryophytes, lichens, and fungi. Rotting wood found on the forest floor and later integrated in the soil surface layer by decomposition provides seedbeds for a variety of tree, shrub, and herbaceous species as well a rooting medium that retains moisture during dry periods.

Criteria for Forest Stand Improvement - Habitat and Soil Quality

This enhancement requires:

- Creation of snags
- Downed wood
- Suitable den/cavity trees distributed throughout the area being treated.

The levels and distribution of materials must be equal to levels found in similar natural community phases indicated in the correlated Ecological Site Description (ESD).

If a suitable ESD has not been developed, NRCS State Offices will develop an example site description that defines the number of snags, the amount of downed wood and number of den trees expected per acre.



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This enhancement is implemented mainly by managing existing live trees, dead snags and woody debris. It may be implemented during thinning or harvesting operations or may be undertaken separately. Refer to Conservation Practice Standard Forest Stand Improvement-666 for criteria on the creation of snags, den/cavity trees, and downed wood.

Documentation Requirements for Forest Stand Improvement - Habitat and Soil Quality

Following implementation of this activity, the landowner must document:

- The average number of snags per acre
- An estimate of percentage of the forest floor covered by downed wood.
- The average number of den/cavity trees per acre
- Delineations on a map or aerial photo of the areas having the distribution of snags per acre, percent cover downed wood, and/or den/cavity trees per acre
- Representative digital pictures of snags, downed wood, and den/cavity trees

ANIMAL ENHANCEMENT ACTIVITY

ANM15 – OR Forest Stand Improvement for Habitat and Soil Quality

Criteria

Site Description:

The forest stand is a monoculture or mix of conifer and hardwood species. A wide variety of stages/classes of decaying wood may be present.

Snags: The minimum number of snags, existing or created, will be 2 per acre on average. Snags should be ≥ 10 inches DBH, ≥ 25 feet tall, and in decay stages 1-6. Both hard and soft snags should be present on the site.

Downed Wood

Eastern Oregon: The minimum coverage of downed wood on the forest floor will be 2 percent. Downed wood is defined as trees and/or branches ≥ 1 " in diameter. An additional 1 piece of the downed wood shall be comprised of logs ≥ 5 inches in diameter (on large end) and in decay classes 1-3. A line transect inventory method will be used to determine percent coverage.

Western Oregon: The minimum coverage of downed wood on the forest floor will be 4 percent. Downed wood is defined as trees and/or branches ≥ 1 " in diameter. An additional 1 piece of the downed wood shall be comprised of logs ≥ 5 inches in diameter (on large end) and in decay classes 1-3. A line transect inventory will be used to determine percent coverage.

LINE TRANSECT INVENTORY INSTRUCTIONS:

To determine percent coverage, layout a 100 foot tape. At every foot mark, record what makes contact with the foot mark. For the 100 feet there should be recorded a minimum of 2 (eastside) or 4 (westside) pieces of downed wood greater than or equal to 1 inch in diameter. Also there should be recorded at least 1 log whose large end diameter is a minimum of 5 inches.

Den Trees: Den trees are live trees with cavities that typically form in deciduous trees or "wolf" coniferous trees. At least 1 den tree will be retained per acre on average. If none exist, one extra snag will be created for every 10 acres. The minimum snag tree size will be 10 inches DBH.

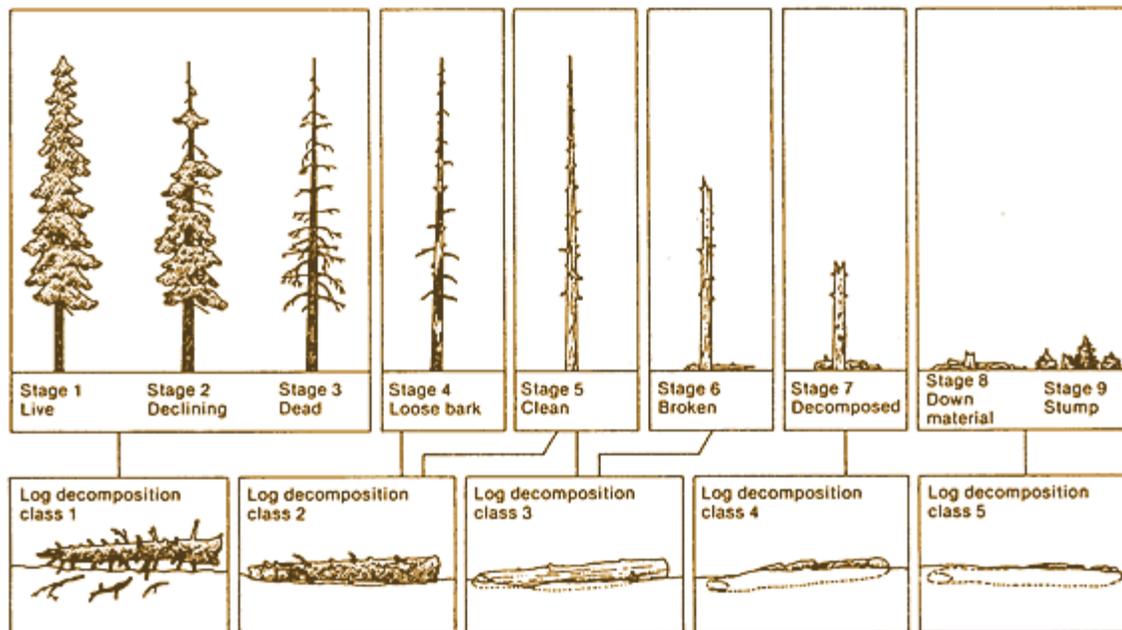


Figure 1. Snag and down wood decay classification system (Maser et al. 1979).

Table 1-Snag condition translated into log decomposition class (reproduced from Maser et al. 1979, table 19, p. 80)

Snag stage	Snag condition	Log class
1-3	Hard snag	1
4-5	Hard snag	2
5-6	Soft Snag	3
7	Soft snag, 70%+ soft sapwood	4

References

Maser et al. 1979. Dead and Down Woody Material. Pgs. 78-95 in Wildlife Habitats in Managed Forests the Blue Mountains of Oregon and Washington. Ag. Handbook No. 553. J.W. Thomas, Ed. USDA Forest Service.

Ohmann and Waddell. 2002. Regional Patterns of Dead Wood in Forested Habitats of Oregon and Washington. USDA Forest Service Gen. Tech. Rep. PSW-GTR-181.